

W5YI

Nation's Oldest Ham Radio Newsletter

REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

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FCC COMPLETES VEC PROGRAM AUDIT

The FCC has completed their financial audit of 1993 VEC activities. The FCC last September asked the three largest Volunteer-Examiner Coordinators to respond to certain questions regarding amateur service examination fees and conflict of interest considerations.

The audit of the VEC System was conducted on the tenth anniversary of amateur service examination self-testing. It has taken a year for the Commission to complete the audit. The three VEC's that participated in the audit were the ARRL-VEC, the W5YI-VEC and CAVEC: the Central Alabama VEC.

Background

FCC rules permit VEC's to be reimbursed for out-of-pocket expenses up to a specified maximum. Reimbursement of expenses associated with amateur service examinations began when Senator Barry Goldwater (K7UGA) ram-rodged the measure through Congress at the request of the American Radio Relay League. ARRL had said that they would be bankrupt if they were not permitted to recoup expenses associated with ham operator testing. The W5YI-VEC applied to be a VEC - as did many other organizations - without the provision for expense reimbursement in place.

Congress approved a maximum \$4.00 reimbursement fee effective September 1, 1994. A provision was made for small annual increases based on inflation as indicated by the Consumer

Price Index (CPI). Once the prior year's inflation percentage is determined by the Department of Labor, the FCC issues a Public Notice that states the maximum allowable fee that may be charged any one person for any one examination at a particular session regardless of the number of examination elements taken.

Maximum Expense Reimbursement

(Rounded to nearest 5¢)

1984-85 - \$4.00	1990 - \$4.95
1986 - \$4.25	1991 - \$5.25
1987 - \$4.35	1992 - \$5.40
1988 - \$4.55	1993 - \$5.60
1989 - \$4.75	1994 - \$5.75

At the request of the ARRL, the FCC informally authorized an accounting system whereby all expenses associated with amateur examinations could be added together during a calendar year. The total allowable test fee to an applicant could not, however, exceed the maximum allowable expense. This system became known as the "Annual Method"

Under the "Annual Method", each examinee at each coordinated examination session is charged the same fee throughout the year. Any overage at the end of the year is used to reduce the fee for the next year. Every VEC adopted this system since it greatly reduces paperwork and allows expensive test sessions to be more or less subsidized by less costly ones during the current

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calendar year. Most VEC's, including the ARRL-VEC and W5YI-VEC elected to charge the maximum allowable test fee amount.

FCC Audits VEC System

On September 21, 1993, the FCC asked the three largest VECs to submit 1993 calendar year information by January 31, 1994 concerning:

EXPENSE REIMBURSEMENT QUESTIONS

- (1.) Total amount of 1993 out-of-pocket expenses.
- (2.) Total amount of test fee reimbursements.
- (3.) Describe procedures used to determine test fee amount and the sharing arrangement between the VEs and the VECs.
- (4.) Were any examinees charged more than the actual out-of-pocket costs.
- (5.) Do the VEs ever charge a test fee for some class(es) of license but not for others?

CONFLICT OF INTEREST QUESTIONS

These questions were addressed to the ARRL-VEC and W5YI-VEC since they are a component of larger organizations that distribute license preparation materials.

- (1.) If the VEs did not charge certain examinees a reimbursement fee, what was the funding source(s) for the out-of-pocket expenses incurred.
- (2.) If fees fell short of expenses, how was the difference made up?
- (3.) Are VEC procedures influenced in any way by any other organizational components.

The deadline was later extended to March 31, 1994, at the request of the ARRL. On May 27, 1994, the FCC asked each of the three VECs another round of questions which had to be responded to in writing.

In addition, each of the three VECs were asked to provide the FCC with the names and station call signs of ten of their most active VEs. The FCC wrote these VEs on April 15th - plus ten more VEs that they randomly selected - for further information regarding the financial handling of test fees. Responses were thus requested from a total of sixty VE's - 20 from each of the three coordinating VECs.

Results of the Audit

On August 19th, the FCC wrote the ARRL-VEC, W5YI-VEC and CAVEC concerning the audit with copies to the remaining 15 VECs. While the FCC received responses from all three VECs, only thirty-four of the sixty VEs responded (57%). Here are some excerpts from the FCC audit letter:

"The year 1993 was the most productive year yet for the VEC System. The three VECs participating in this inquiry coordinated over 9,600 examination

sessions where nearly eighty-eight percent of the 193,901 elements taken during 1993 were administered. The amateur service community is well-served with 113,028 persons being examined at 10,848 sessions. We received no complaints about a lack of examination opportunities. The VECs were outstanding in reviewing and correcting the application forms before they were submitted for processing. The defective rate was 0.2 percent.

"The VEC System in 1993, however, was not without its difficulties. Some 3,052 applications were filed with the Commission later than the twenty days allowed by [the rules.] We believe that such delays will be eliminated as soon as the Private Radio Bureau's Licensing Division begins accepting electronically filed applications from the VECs.

"Also during 1993, more cheating was uncovered in the VEC System than in any prior year. The Commission was called upon to take post-license grant corrective action in an unprecedented number of cases...

"In 1993, the maximum amount of reimbursement from anyone examinee for any one examination at a particular session was \$5.60. According to the information furnished by the VECs, there was a wide variation in examination expense and reimbursement. Expense ranged from a low of \$4.89 (CAVEC) to a high of \$7.96 (ARRL-VEC), with an average of \$7.37. [W5YI=\$6.48] The VECs' coordination expense, alone, averaged \$5.67. It ranged from a low of \$2.16 (CAVEC) to a high of \$7.08 (ARRL-VEC.) [W5YI=\$3.27] The VEs' administrative expense ranged from a low of \$0.88 (ARRL-VEC) to a high of \$3.20 (W5YI-VEC.) [CAVEC=\$2.73] The average was \$1.70.

"The ratio of coordination expense to administrative expense ranged from 0.8:1 (CAVEC) to 8.0:1 (ARRL-VEC.) [W5YI-VEC=1.0:1] The average was 3.3:1. The W5YI-VEC and the ARRL-VEC suffered a combined shortfall of over \$208,000, while the CAVEC showed a slight surplus. The CAVEC, moreover, was successful in maintaining expenses over twelve percent below the maximum that VEs and VECs were allowed to recover. Its actual coordination and administration expense was \$4.89 per examinee. The ratio of coordination reimbursement to administration reimbursement also showed considerable variation. It ranged from 0.8:1 (CAVEC) to 5.3:1 (ARRL-VEC). [W5YI-VEC=0.9:1] The average was 2.2:1.

"There were twenty-one responses from VEs selected by the VECs and thirteen responses from those selected by the Private Radio Bureau's Licensing Division. The information provided by the VEs generally confirms the information concerning administration expenses and reimbursement provided by the

VECs. The variation in the cost to administer an examination ranged from a low of \$0.83 (VEs of ARRL-VEC) to a high of \$3.10 (VEs of W5YI-VEC). [CAVEC = \$2.10] the average was \$1.70.

"The ratio of coordination expense to administration expense ranged from 0.8:1 (CAVEC) to 8.0:1 (ARRL-VEC.) [W5YI=1.0:1] The average was 3.3:1... The ratio of coordination reimbursement to administration expense also showed a considerable variation. It ranged from 0.8:1 (CAVEC) to 5.3:1 (ARRL-VEC.) [W5YI-VEC=0.9:1] The average was 2.2:1"

FCC recommendations

- (1.) "We recommend that all VEs and VECs strive to keep their expenses in preparing, processing, administering or coordinating examinations within the amount of the reimbursement fee they are allowed."
- (2.) "We recommend that VECs make clear to their accredited VEs that they may accept reimbursement for their out-of-pocket costs in administering examinations, even though the VEC decides not to accept reimbursement."
- (3.) "...we must stress the importance of a VEC that receives funds [from a parent organization] avoid a conflict of interest or even the appearance of a possible conflict of interest.... We recommend, therefore, that you consider implementing the [following] suggestions...:
 - (a.) each VEC should be a distinct legal entity from the parent organization,
 - (b.) the name should not be similar,
 - (c.) the VEC should have its own financial account,
 - (d.) the VEC component should be physically separate from the parent organization
 - (e.) different persons should be employed in the VEC and parent organization,
 - (f.) all funds provided the VEC by the parent organization should clearly be identified as such, and;
 - (g.) the terms by which the funds are provided to the VEC be clearly set forth in writing.

The eight-page single spaced audit letter results was signed by John b. Johnston, Chief of the FCC's Personal Radio Branch.

ARRL SUBMITS COMMENTS ON WRC-95

The American Radio Relay League has submitted reply comments on a *Notice of Inquiry* concerning preparation for ITU World Radiotelecommunication Conferences beginning with WRC-95 scheduled to convene in November of 1995.

- (1.) The League urges that the issue of 7 MHz realignment, and modification of amateur or broadcasting allocations at 7

MHz, not be considered prior to the WRC in 2001, in order to permit the necessary migration of fixed and mobile services to higher frequencies.

At WARC-92 a proposal to realign the band allocated to the ... Amateur Service presently beginning at 7,000 kHz was not adopted. This proposal would have divided the allocation between 7,000 and 7,300 kHz, which is presently shared between the Broadcasting Service in Regions 1 and 3, and the Amateur Service in Region 2, into two exclusive world-wide allocations; 7,000 to 7,200 kHz for amateurs and 7,200 to 7,300 kHz for broadcasting.

The Amateur Service would have been allocated an additional exclusive 100 kHz between 6,900 and 7,000 kHz, and broadcasting an additional exclusive allocation between 7,300 and 7,525 kHz. Both the Amateur Service and the H.F. Broadcasting Service would have benefited considerably from the adoption of such a proposal, since WARC-79 made no additional allocations to broadcasting in this critical range.

- (2.) The League asks that a MSS (Mobile Satellite Service) allocation at 2300-2310 MHz, or 2390-2420 MHz not be considered internationally, "...due to the absolute obligation established by Congress in the *Omnibus Budget Reconciliation Act* to protect existing amateur radio communications in those segments in connection with the possible reallocation of those segments from Government to non-Government use."

Amateur Service and Amateur-Satellite Service each have significant need for continued operation at 2300-2310 MHz and 2390-2450 MHz. It is the policy of the United States, as set forth in the *Omnibus Budget Reconciliation Act*, that existing amateur operations in the bands proposed by NTIA for reallocation not be disrupted, as would be the case if MSS operation were to commence in the 2300-2310 or 2390-2420 MHz bands. Accordingly, MSS operation in those segments specifically should not be an agenda item for either the WRC-97 or WRC-99 conferences.

- (3.) Finally, the WRC-99 agenda should include consideration of an *International Amateur Radio Permit*, to permit operation by radio amateurs licensed by their home country during temporary visits to countries other than their country of residence.

The International Amateur Radio Permit was requested as an agenda item for the WRC-97 agenda. The concept was an international "roaming" amateur license, by means of which United States' amateur licensees could travel to other countries, and other countries' amateurs could travel to the United States, and operate amateur stations based on a combination of the amateur license of the visitor's home country and an endorsement based on an international licensing agreement.

The existing *European Conference of Postal and Telecommunications Administrations* (CEPT) Recommendation T/R 61-01, known as the CEPT Common License, provides a good basis for the IARP in Region 1. Another interim opportunity is a similar common amateur license for the Americas, which was supported in *Inter-American Telecommunications Conference*, now Commission, (CITEL). The IARU, having commenced arrangements within Region 2 for an IARP, continues to urge the inclusion in the agenda for WRC-99 the issue of an international amateur radio permit.

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FCC ON 13-CM AMATEUR RADIO SPECTRUM

Here are excerpts concerning the Amateur Radio Service from an FCC report on NTIA's preliminary spectrum recommendations. The report was submitted to the U.S. Dept. of Commerce on August 9th. (NTIA is the White House telecommunications advisor.)

This section of the report deals with the 13-cm shared ham band at 2300-2310 and 2390-2450 MHz. Portions of this Government band have been targeted for reallocation to the commercial sector. AMSAT has been very upset about the possibility of losing amateur access to portions of this 13-cm Government band. The FCC findings are generally supportive of allowing the amateur service to retain their secondary status.

2300-2310 MHz and 2390-2400 MHz (13-cm band)

Amateur interests object to reallocation of these bands because of their current use by the Amateur service. Commenters state that NTIA failed to determine accurately the effect that reallocation of these bands would have in disrupting current use of Government bands by the Amateur service, as required by the Reconciliation Act. Further, commenters note that NTIA failed to determine to what extent commercial users could share this spectrum with the Amateur service, another requirement of the Reconciliation Act. Commenters have indicated that sharing between amateur radio licensees and commercial radio users is not feasible.

We believe that several factors hamper the possibilities for productive non-Government use of these bands. As with most of the spectrum identified for reallocation below 3 GHz, these 10 megahertz-wide band segments may prove too small to support new services.

The largest factor affecting future use of these bands is their existing availability for use by the Amateur service. Congress specifically sought to avoid disruption of existing use of Federal Government frequencies by amateur radio licensees. We agree with commenters that there is substantial likelihood that reallocation of the 2300-2310 MHz and 2390-2400 MHz bands to commercial or local government use could cause serious disruption to Amateur service use of these bands.

2402-2417 MHz (13-cm band)

The Preliminary Report identifies the 2402-2417 MHz band for exclusive non-Government use to be made available immediately. According to the comments, the 2402-2417 MHz band is the most controversial band identified for reallocation. This band is also currently available for use on a secondary basis by the Amateur service and commenters raise the same concerns with respect to reallocation of this band as were discussed with respect to the 2300-2310 MHz and 2390-2400 MHz bands. In addition, amateur interests raise concerns about the future of the Amateur satellite service in this spectrum.

The most problematic aspect of this band is its existing use by non-Government *Industrial, Scientific, and Medical* (ISM) devices and by devices authorized under *Part 15* of our Rules. The 2400-2500 MHz band is occupied by over 80 million microwave ovens, which are ISM devices. An analysis concludes that the high level of noise created by microwave

ovens between 2425-2475 MHz renders successful use of this frequency range by a licensed communication service unlikely.

Considering the potentially adverse effects on the amateur radio service and on use of the band by devices operating under *Part 15*, as well as the difficulties in using this band because of the amount of noise from ISM devices, we believe that reallocation of this band presents less value to the private sector than any other band identified for reallocation in the Preliminary Report.

- **The FCC's Washington headquarters will be moving** from their present northwest downtown location to southwest Washington, DC after all. It seems that an agreement between the General Services Administration and "The Portals" has been reinstated by an appeals court. The U.S. Court of Appeals ruled that GSA (the federal leasing agent) had improperly terminated the lease in 1991 after FCC officials turned thumbs down on the move. The Commission had argued that the leased space was inadequate to accommodate their needs and they did not want to leave the fashionable business area which was more convenient for communications industry representatives. The GSA has now re-signed the lease with "The Portals" (which is far from completed) and is scheduled to eventually move all of their administrative offices some two miles south. It could take six to eight years for the move to be concluded. "The Portals" is located on the banks of the Potomac River between the Washington Monument and the U.S. Capitol Building. The lease will cost taxpayers about \$15 million annually for 440,000 square feet - about \$34 a square foot. (The earlier lease was at \$32.40 per foot.) We understand, however, that the FCC is not giving up the fight to remain where they are.

- **The Information Superhighway is to have a wiretap key.** The Federal Bureau of Investigation and other law enforcement agencies are being given the technical means to perform legal wiretaps as the telecommunications industry moves from analog to digital technology. Pending legislation authorizes an expenditure of up to \$500 million for the development and implementation of new encryption technology, the skeleton key to which will be held by law enforcement. Common carriers (both wired and wireless) must make the necessary modifications to their networks to enable "authorized" wiretapping. The proposed digital wiretap laws do not cover on-line service providers, (like Prodigy), commercial Internet providers, electronic mail or operators of private communications systems. The bill is expected to win quick Congressional approval since it addresses the nation's number one concern: violence. Privacy advocates oppose the bill as an infringement of human rights.

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AMATEUR RADIO CALL SIGNS

...issued as of the first of August 1994:

Radio District	Gp. "A" Extra	Gp. "B" Advan.	Gp. "C" Tech/Gen	Gp. "D" Novice
0 (*)	AA0RW	KG0OO	(***)	KB0OKY
1 (*)	AA1JV	KD1VZ	N1SUN	KB1BJW
2 (*)	AA2TB	KF2WQ	N2ZZY	KB2RFN
3 (*)	AA3IF	KE3NT	N3TBF	KB3BEH
4 (*)	AD4UV	KR4XT	(***)	KE4PKY
5 (*)	AB5VT	KJ5ZS	(***)	KC5IVA
6 (*)	AC6DS	KO6FG	(***)	KE6KYY
7 (*)	AB7DK	KJ7BA	(***)	KC7EUY
8 (*)	AA8PM	KG8KK	(***)	KB8UIY
9 (*)	AA9II	KF9WU	N9YCQ	KB9JAN
N. Mariana Is.	KH0I	AH0AU	KH0DL	WH0ABA
Guam	WH2F	AH2CU	KH2KA	WH2ANK
Johnston Is.	AH3D	AH3AD	KH3AG	WH3AAG
Midway Is.		AH4AA	KH4AG	WH4AAH
Hawaii	(**)	AH6NN	WH6WD	WH6CRH
Kure Is.			KH7AA	
Amer. Samoa	AH8K	AH8AG	KH8BG	WH8ABB
Wake W. Peale	AH9C	AH9AD	KH9AE	WH9AAI
Alaska	(**)	AL7PS	WL7WJ	WL7CHS
Virgin Is.	WP2O	KP2CD	NP2HQ	WP2AHU
Puerto Rico	(**)	KP4XE	(***)	WP4MEJ

CALL SIGN WATCH: * = All 2-by-1 "W" calls, ** = all Group A (2-by-1), and *** = all Group "C" (1-by-3 "N") call signs have now been allocated.

[Source: FCC, Gettysburg, Pennsylvania]

"NO GROWTH" IN THE AMATEUR SERVICE!!

Fewer new amateurs and failure to renew existing ham licenses are resulting in a stagnant amateur service! Here are the year-to-date (Y-T-D) figures:

Census of Active Amateurs - Total all classes:							Y-T-D
Yr.	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	Inc.:
'94	631598	631726	631042	630347	630531	631399	(997)
'93	587657	594809	596225	600445	603717	608733	+20079
'92	543117	547139	551198	555989	561197	565350	+22233
'91	500243	502133	504360	507083	512918	517665	+17422

First Time Amateurs - Total all classes:							Y-T-D
Year	Jan.	Feb.	March	April	May	Total	
1994	2398	2589	3010	1773	2920	12690	Vy. Low!
1993	4728	3880	4239	3290	5035	21172	
1992	4030	4092	4806	5215	4178	22320	
1991	1816	2162	2656	5749	4714	17097	

Ten year term ham tickets started in 1984 and in 1994 began coming up for renewal. And only 48.6% of these tickets are being continued. For the first 3 months of 1994, 14,836 amateurs failed to extend their ticket. (Many are Silent Keys.) There have been 14006 renewals this year out of 28842 eligible to renew.) Note also that the number of first time amateurs is 40% less than a year ago!

MAY AMATEUR LICENSING STATISTICS

May	1991	1992	1993	1994
New Amateurs:				
New Novices	1801	1066	867	211
New Tech's	2858	3058	4104	2659
Total New:	4714	4178	5035	2920
Upgrading:				
Novices	1419	636	676	99
Technicians	*642	*507	*797	*674
Generals	414	319	597	485
Advanced	288	227	348	255
Total:	2763	1689	2418	1513

Renewals:				
Total Renew:	72	70	135	4030
Novices	7	0	14	436
Purged:				
Total Dropped:	0	25	19	39
Novices	0	14	4	4

Census:				
Indiv. Oper.	517665	565350	608733	631399
Change/Year	+63737	+47685	+43383	+22666

Individual Operators by Class: (and % of total)

Extra	Advan.	General	Technic.	Novice	Total:
May 1991					
55212	106312	121053	138209	96879	517665
10.7%	20.5%	23.4%	26.7%	18.7%	100.0%

May 1992					
59169	108736	123730	174936	98779	565350
10.5%	19.2%	21.9%	30.9%	17.5%	100.0%

May 1993					
60085	111169	126306	207803	100370	608733
10.4%	18.3%	20.7%	34.1%	16.5%	100.0%

May 1994					
65942	111587	124589	235484	93797	631399
10.4%	17.7%	19.7%	37.3%	14.9%	100.0%

Club/					
RACES &	(1991)	(1992)	(1993)	(1994)	
Military:	2432	2431	2431	2344	
Total Active:	520097	567781	611164	633743	
% Increase	+14.0%	+9.2%	+7.6%	+3.7%	

(* = Does not include Technicians upgrading to Tech Plus)

AMATEURS BY CALL SIGN GROUP:

Group	Extra	Advan.	General	Technic.	Novice	Total
A	36968	647	230	6	0	37851
B	4613	30535	51	6	1	35036
C	15164	43777	66150	99424	39	224554
D	9193	36828	58158	136048	93757	333984
Other	4					4
Total	65942	112225	124589	235484	93797	631399

[Group "A"=2X1 & 2X2; "B"=2X2; "C"=1X3 "D"=2X3 format.]

[Source: FCC Licensing Facility, Gettysburg, PA]

COMMENTERS TURN "THUMBS DOWN" ON RADIO SHACK'S "FAMILY RADIO SERVICE"

The Tandy/Radio Shack proposal to create a new unregulated and unlicensed "Family Radio Service" has met with some rough sledding! At least from the comments we have seen. FRS would use 500 mW radios to access 16 channels within spectrum allocated to the 467-MHz General Mobile Radio Service.

The FCC assigned a 30 day comment period to the petition which closed on August 25th. Here are some excerpts from formal comments on RM-8499, **"Amendment of the Commission's Rules to Establish a New Radio Service."**

COMMENTS FROM: Corwin D. Moore, Jr., WB8UPM, PERSONAL RADIO STEERING GROUP, Ann Arbor, MI
PRSG, an all-volunteer, not-for-profit corporation established in 1980, represents GMRS users.

- (1.) Creation of the FRS would significantly disrupt and impair both current GMRS operations and the future GMRS mobile information infrastructure. The Commission has previously considered and rejected similar proposals.
- (2.) Spectrum sharing between licensed and unlicensed personal radio services is not feasible.
- (3.) FRS would hinder evolution toward and implementation of "GMRS Refarming" with more spectrum-efficient technologies.
- (4.) FRS would intensify interference and enforcement problems in the GMRS.
- (5.) GMRS has been experiencing "explosive growth" Marketing of radios by Tandy and other manufacturers is a major reason for this increase. Tandy's claim that interstitial channels are under utilized is not true.
- (6.) The operation of similar services, one licensed but the other unlicensed, on the same channels would produce unmanageable enforcement problems and confusion about the appropriate licensing requirements.
- (7.) Tandy asserts "In much the same way as the 'codeless' license was conceived as a way to participate at the entry level in the Amateur Radio Service, FRS will provide users with exposure to the additional features and capabilities of GMRS. Some FRS users will choose to upgrade to that more powerful, licensed service." Codeless entry level into Amateur Radio is through examinations and licensing, whereas FRS would be completely unlicensed. The Amateur Service lost no accountability, user-education, compliance and enforcement benefits of licensing when it initiated a codeless license class.
- (8.) The GMRS has a history of abuse by commercial and industrial users. The FCC was well aware of the incompatibility of personal/family and commercial use of the same shared spectrum. The FCC eventually limited GMRS eligibility only to individual persons.
- (9.) The sale of Radio Shack GMRS radios to commercial and industrial purchasers has created a significant influx of ineligible users. Many are failing to license properly or at all.
- (10.) Tandy argues that an FRS-type service would offer a communications alternative for the public similar to that of

"...Japan and other countries whose citizens have already started to enjoy the many benefits of FRS-like radio services." The Japanese Low Power Radio System (JSLPRS) is not similar to the requested Family Radio Service "...the quality, the efficiency, and the technical and regulatory characteristics of JSLPRS do not transfer to FRS."

(11.) Tandy's supposed demonstration of non-interference while operating at Walt Disney World (WDW) is highly misleading. GMRS personal licensees have complained of the WDW GMRS operations for years. There are few examples better than WDW of the abuse of GMRS by commercial and industrial entities eligible in other services. WDW operates in substantial violation of FCC rules, including requirements about station identification and pre-transmission monitoring.

(12.) The creation of an unregulated FRS would inevitably encourage the development of a wide aftermarket of range-extending and power-increasing devices. A half-watt transmitter coupled to an advantageously-sited antenna could cause interference to adjacent- and co-channel communications over dozens of miles. Power amplifiers for this band are readily available, and are entirely legal and desirable for the operation of many licensed radio services. Amplifiers could not realistically be prohibited, such as the FCC did for similar devices operated in the 27 MHz band.

(13.) The Commission is fully aware that a 12.5 KHz channel separation between communications employing conventional FM emissions with 5 KHz deviation is inadequate. Interference CAN and WILL occur.

(14.) The 467 MHz GMRS interstitial frequencies are not being "warehoused" as Tandy mischaracterizes. Instead, they are held in reserve by the Commission for stated reasons well accepted in the GMRS community, and after careful deliberation and public comment.

(15.) Without mandatory safeguards, inconsiderate users will easily exploit the FRS. Besides illegal use by commercial users eligible in other services and interference to licensed GMRS repeaters, we anticipate telephone autopatch, music broadcasting, obscenity, 24-hour emissions and power-amplified chaos among the abuses to infect unlicensed FRS. Tandy has not explained how it intends to prevent these results. Perhaps it expects enthusiastic FCC enforcement. Commission enforcement efforts, however, would receive no financial support from FRS. Unlike GMRS licensees, unlicensed FRS purchasers would pay no regulatory fees. FRS would quickly be abandoned at the bottom of Commission enforcement priorities.

(16.) Tandy could deploy the FRS in the 902 or 2400 MHz "ISM" or "consumer" bands available to unlicensed devices. Part 15 permits transmitter power as high as one watt for spread-spectrum devices. Alternatively, Tandy could deploy the FRS in the unlicensed spectrum of the Personal Communications Services at 1910-1930 MHz. The Commission not only allocated 20 MHz to unlicensed PCS devices, it committed to examine even more spectrum allocations to these devices.

COMMENTS OF: REACT INTERNATIONAL ; WICHITA, KS
James E. Bear, WB3FQY, chairman, Board of Directors
REACT International, Inc. (REACT) is a worldwide, member based organization of public service Teams serving their

local communities. its membership includes over 450 Teams and 6500 individuals. "

(1.) While the currently available services, including CB, GMRS, Cellular Radio Telephone, the Amateur Radio Service, and the (under development) Personal Communications Service (PCS) provide immediate and future alternatives for the family, they all fail to meet the needs of the consumer market. CB radio suffers from limitations resulting from use of technologies of the 1950s; the GMRS is not configured for easy use by the untrained family member; and cellular and PCS radio are priced so as to discourage use by internal, family matters.

(2.) The General Mobile Radio Service (GMRS) is not capable, at this time, of handling an influx of thousands (or millions) of users that would result from the Tandy proposal.

(3.) The Amateur Service with its requirement for operator licensing and intense attention to operating protocols, all but mandates that the user hold a high level of concern that can not be found in persons holding only a utility interest.

(4.) Many public service organizations have fled from the CB Radio Service simply because it is impossible to operate a town watch, provide radio communications in a disaster, or to call for emergency response personnel in a radio environment where great numbers of untrained operators seek to utilize a limited number of radio channels. It is precisely because of licensing requirements that the GMRS provides a more ordered environment that allows for community service.

(5.) The intertwining of untrained operators from differing radio services can go a long way to breeding misunderstandings, hard feelings, and (of greatest threat to vendors such as Radio Shack) dissatisfaction with the purchase.

(6.) For years, operators in the Amateur Radio Service have enjoyed access, on a secondary basis, to frequencies co-assigned to other users (most typically governmental users). While not without drawbacks, this arrangement has worked well because of the sole reason that all operators involved have been well trained and have a full understanding of regulations, operating techniques and expectations involved. In an unlicensed FRS it will be unrealistic to expect such a harmonious coexistence [or]that an untrained operator who purchased a radio from a retail store will even understand the concept of secondary authority, much less comply....

(7.) Many of the concepts advanced by Tandy contain merit, and should be implemented in a new, consumer grade radio service such as its proposed FRS. Tandy asserts that:

- The need exists for the general public to communicate in a diversity of everyday situations without incurring exorbitant per minute charges or monthly services fees.
- Parents will have an extra measure of security by using FRS to monitor their children at play.
- Families and friends will be able to maintain close contact....

REACT strongly agrees with the concept, and strongly urges the Commission to work with the representatives of the various user constituencies to identify mechanisms in future or current radio services to fill these needs.

(8.) A Family Radio Service, interlaced with the General Mobile Radio Service, as proposed by Tandy, would suffer from channel congestion, interference, and customer dissatisfaction. In addition, the utility of the GMRS for volunteer ser-

vice organizations would be greatly diminished.

(9.) While REACT strongly feels that additional communication alternatives are required by families as well as public service organizations, the proposal set forth by Tandy Corporation fails to address many, if not most, of the needs that can be identified. Therefore, REACT strongly urges the Commission to dismiss this Petition for Rule Making in RM- 8499, and to move forward in discussions with the various constituencies that require improved radio communication alternatives.

COMMENTS OF: DR. MICHAEL C. TRAHOS, KB4PGC

(Alexandria, VA.) *He is licensed in the Amateur Radio Service, the Business Radio Service, the General Mobile Radio Service and Special Emergency Radio Service.*

(1.) Tandy states that "...during the nearly six-year period following the GMRS Report & Order, no plan has been advanced nor has the use of the 467 MHz channels been requested." Though this is true, reasons exist for the lack of a plan. The Commission did not authorize the use of the 467 MHz interstitials because such a release "...may compromise the evolution of repeater technology..."

(2.) Tandy's petition proposes no new advanced technologies, such as digital or narrowbanding. They merely plan to use current, 25 KHz bandwidth, analog technology equipment with the addition of sophisticated selective-calling "bells and whistles". Flooding the 467 MHz interstitial frequencies with inexpensive, current technology, analog unlicensed transceivers would definitely jeopardize any chance for the future evolution of digital and narrow-band repeater GMRS technology.

(3.) FRS also presents a much more serious problem; ...risk of interference to current primary 467 MHz repeater input channels.

(4.) What is happening in the CBers with off frequency transceivers, and unfortunate lack of FOB enforcement thereof, will also become the norm in the proposed FRS. Off frequency FRS operations on the 467 MHz interstitials would have a more devastating effect.

(5.) Mixing an unlicensed FRS with the licensed GMRS offers great potential for abuse without regulatory enforcement, particularly from the commercial sector.

(6.) If, however, the Commission should find it in the public interest to eventually adopt a FRS, then the service should be structured as follows:

- a. FRS transceivers should be allowed only to transmit/receive on the 462 MHz interstitial frequencies for routine communications and 462.675 MHz for short distance emergency communications only.
- b. FRS must be prohibited from transmitting on the 467 MHz interstitial frequencies and 467.675 MHz.
- c. FRS transceivers should be narrow-spaced, incapable of wide-spacing alteration to transmit/receive on the 467 MHz band.
- d. FRS transmitters should be restricted to a 500 mW ERP limit and utilize an internally attached antenna with no external antenna connections available.
- e. FRS transmissions on the 462.675 MHz frequency should be accompanied by a simple WT + 7 digit telephone number call sign identification.

● Jim Wills, N5HCT of Tyler TX submitted a petition to the FCC last fall to reestablish the First Class Radiotelephone Operator license which was discontinued more than ten years ago. Prior to July 8, 1981, this license was required by persons installing, maintaining or servicing most commercial radio transmitting equipment.

Wills said restoring the First Phone license would also establish technical standards and produce revenue for the Commission. The FCC apparently thought the proposal had merit and assigned File No. RM-8400 to the petition. After a very short comment period, however, the petition was denied. The FCC said (on May 23, 1994) that the proposal would not serve the public interest and would incur "...significant administrative burdens."

Not accepting the FCC decision, Wills has now authored another petition which asks the FCC to establish a new First Class Communications License and to restore mandatory license requirements to perform installation and maintenance on any device delivering RF energy at minimum levels to be established by the FCC. Instead of forwarding the petition to the FCC, however, he sent it to Edward J. Markey, Chairman of the powerful House Telecommunications and Finance Committee.

To obtain a First Class Communications (FCC) license, an examinee would have to pass commercial exam Elements 1 (Radio law), 3 (Electronics) and a new Element 4 to be developed by a panel of industry representatives and educators. The license term would be either 10 years or lifetime. Wills wants (for a fee) all previous First Class Radiotelephone license holders to be grandfathered into the new license.

He argues that the General Radiotelephone Operator License (GROL) has limited appeal since it is not required to perform most installation and maintenance on radio transmitters. He believes "The removal of the First Class Radiotelephone license by the FCC on July 8, 1981 was an insult to those who worked to achieve the license."

Wills also advised Markey of the "discriminatory ...erroneous and short-sighted" handling of his previous petition. He adds, "Licensing is a valuable national resource and must be devel-

oped and utilized to the highest degree. I therefore respectfully request that the Telecommunications Subcommittee review the new revised petition and submit it to the FCC on my behalf, along with your endorsement if you deem it has merit." It will be interesting to see how the Telecommunications Subcommittee handles this petition!

● "Insurance for hams by hams" is the slogan of a new amateur radio insurance plan underwritten by the Great American Insurance Group. The program was developed by Bill Hill, W3IBT, a ham for 38 years, who has been in the insurance business since 1967. He says, "A couple of years ago I realized that there were apparently no alternatives to the ARRL Insurance Program for ham equipment."

Bill has now put together a program which does not require membership in any organization. (The League's plan requires ARRL membership.)

The annual "Basic All Risk" commercial radio/computer equipment coverage premium is 1.5% of insured value. And the low \$50 deductible for each claim is lower than most homeowner's insurance. Minimum premium is \$25 with payment by check or credit card. (Coverage can also be extended to include towers, antennas, rotors, mechanical breakdown and electrical injury at a higher premium and a \$250 deductible.) HRIA's "EZ Application" takes only a minute to fill out.

Ham Radio Insurance Associates, Inc., (P.O. Box 201, Canonsburg, PA 15317) can be reached at 1-800-545-8881 or 412/746-5944.

● New Quarter Century Wireless Association officers and directors take office on September 1st! They are:
Lew McCoy, W1ICP - President
Jack Kelleher, W4ZC - Vice President
John Swafford, W4HU - Secretary
Wes Randles, W4COW - Treasurer

The new Director line up includes:
Walt Brink W3WPY, Milt Chaffee W1EFW, John Edel K8LBZ, Gary Harrison WAØRWS, John Huntoon W1RW, Larry Shima WØPAN, Croft Taylor VE3CT, Jack Troster W6ISQ, Milly Wise, W5OVH and Ed Yoder W3YMB.

All will be attending the National QCWA Convention in El Paso, TX from September 29 to October 1, 1994.

● The upcoming STS-64 SAREX mission of the Space Shuttle "Discovery" is still on for September 9th in spite of the last second launch pad shutdown of STS-68. STS-64 will be commanded by Dick Richards, KB5SIW with new hams, pilot Blaine Hammon KC5HBS and mission specialist Jerry Linenget KC5HBR also on board. Launch window for the 9-day mission begin at 4:30 p.m. EDT.

STS-64 is the last SAREX flight scheduled for this year. January 1995 will see veteran Ron Parise WA4SIR and Steve Oswald KB5YSR (and possibly two other astronauts who are working on their ham tickets) aboard STS-67. [Thanks AMSAT]

● The Radio Society of Great Britain (RSGB) also advises that Israel, Peru and New Zealand have agreed to take part in CEPT Agreement TR61-01 which allows their amateurs to operate their amateur radio equipment in 43 different European CEPT countries on a reciprocal basis without further paperwork.

● The Jones Computer Network (JCN) launches next week with 24-hour cable and satellite programming devoted exclusively to computer enthusiasts.

DirectTV, the new (and rapidly expanding) direct broadcast satellite service has successfully orbited a second DBS satellite which will begin broadcasting this month. DBS-2 cost \$200 million to launch. A third, to be launched early next year, will allow DirectTV to expand to 150 channels. Despite a \$700 equipment price tag, the 12-state initial rollout of DirectTV is going well.

● Ray Morrow, W7AWE, (Salem, OR) founder of Morrow Radio Mfg. Inc., has passed away at the age of 81. His compact "Morrow Radios" were popular with mobile ham operators in the 50's. Ray and his son, Ray, Jr., founded "Il-Morrow" (Tomorrow) in the 70's and developed terrestrial navigation technology which became the basis of all Global Positioning System (GPS) equipment in use today. The firm was eventually acquired by United Parcel Service who wanted to use Il-Morrow technology to track packages on 220-222 MHz. They never used the it, however, ...instead opting to go with cellular technology. W7AWE was a past president of the Salem Amateur Radio Club.

PRIVATIZED COMMERCIAL RADIO TESTING

The FCC has released the second quarter 1994 results. NRE (National Radio Examiners) is the Commercial Radio testing division of the W5YI Group, Inc.

	No. of Examinees	No. of Elements	Elements Passed	Percent Passed
COLEM				
Elkins	2862	5514	4991	90.5%
NRE	1804	3152	2722	86.4%
ETAI	664	925	720	77.8%
Sea Sch.	223	221	171	76.7%
ISCET	508	945	721	77.1%
Drake	345	397	293	73.8%
NARTE	528	905	652	72.04
Sylvan	437	437	299	68.4%
NABER	77	77	46	59.5%
TOTAL	7448	12573	10615	84.4%

Drake= Drake Training & Technologies, Bloomington, MN

Elkins= Elkins Institute/Dallas, TX

ETAI= Electronic Technicians Association, International/Greencastle, IN

ISCET= International Society of Certified Electronic Technicians, Ft. Worth, TX

NABER= National Association of Business and Educational Radio, Alexandria, VA

NARTE= National Association of Radio Telecommunications Engineers, Medway, MA

NRE= National Radio Examiners/Dallas, TX (W5YI Group)

Sea Sch.=Sea School (Maritime), St. Petersburg, FL

Sylvan= Sylvan Learning Centers, Columbia, MD

The FCC has now released all seven commercial radio operator question pools. These are:

Element No. and Description:

- 1: Radio Law & Operating Practices
- 3: Electronic fundamentals & Techniques
- 5: Basic Radiotelegraph
- 6: Advanced Radiotelegraph
- 7: GMDSS/Radio Operator
(Global Maritime Distress & Safety System)
- 8: Radar Endorsement
- 9: GMDSS/Radio Maintainer

Element 1 (170 questions) and Element 3 (726 questions) are available in a single 336-page textbook with answer explanations: (\$19.95 + \$2.00 s/h). Passing Element 1 is required for the Marine Radio Operator Permit (MROP) ...both Elements 1 and 3 for the General Radiotelephone Operator License (GROL.)

The Element 7 (446 questions), Element 8 (293 questions) and Element 9 (256 questions) are available at \$7.95 for each pool. The Radiotelegraph Element 5 & 6 (172 and 616 questions) have been combined into a single booklet. (\$13.95) All prices includes postage. Credit card orders: (toll free) 1-800-669-9594 (or send check/money order: NRE, P.O. Box 565206, Dallas, TX 75356.) The question pools contain all multiple choices, diagrams and answers.

THE CEPT INTERNATIONAL AMATEUR LICENSE *Harmonized Amateur Radio Examination Certificate*

In our June 15th newsletter we mentioned that the United States was considering joining the CEPT (European Community) agreement that permits temporary reciprocal amateur operation in certain foreign nations. At the VEC Conference in June, our FCC said that CEPT international licensing could lead to a possible simplification of our own license structure.

CEPT, an acronym for the *European Conference of Postal and Telecommunications Administrations*, can be thought of as the telecommunications ruling body across Eastern Europe, including the United Kingdom, and Scandinavia. The CEPT nations agreed in Recommendation T/R 61-01E to permit visiting amateurs of Non-CEPT Administrations to participate in the CEPT radio amateur licensing systems for short periods of time.

Countries outside of CEPT would simply compare their national licenses to one of two CEPT amateur service licenses. CEPT Class "A" requires Morse code knowledge and allows the use of all amateur service frequency bands available where the amateur station is to be operated. CEPT Class "B" does not require manual telegraphy knowledge and allows 30 MHz and higher frequency operation.

Foreign nationals operating an amateur station for longer periods of time in CEPT recognized countries is covered by another document: Recommendation T/R 61-02E. This resolution, adopted in 1990 by the European Radiocommunications Committee (the ERC is based in Copenhagen Denmark), recognizes that:

- (a) CEPT Recommendation T/R 61-01E concerns only temporary use of portable and mobile radio stations in CEPT countries;
- (b) most CEPT countries are seeking to harmonize regulations and matters concerning non-commercial and recreational activities of their citizens;
- (c) it is highly desirable to establish a common arrangement for radio amateurs who wish to use amateur radio stations in another country in which they are taking residence;
- (d) a common approach among CEPT countries can be found in spite of a great variety of prevailing classes of amateur licenses and examinations;
- (e) the classification of various national license classes into the two CEPT license classes causes some difficulties regarding the minimum examination standard.

Recommendation T/R 61-02E authorizes CEPT countries to issue a mutually recognized *Harmonized Amateur Radio Examination Certificate (HAREC)*. CEPT Administrations will issue their national amateur service licenses corresponding to CEPT examination level "A"

or "B" to foreign nationals who possess a *Harmonized Amateur Radio Examination Certificate* issued by a CEPT Administration and who stay in their country for a period longer than three months. (Three months is apparently the temporary operations time limit authorized by T/R 61-01E.)

Any person who has obtained a *Harmonized Amateur Radio Examination Certificate* in another CEPT country has the right on return to his own country to obtain a license there without having to pass a further examination. Thus, it appears the HAREC is an international "credit certificate" toward a full privilege or VHF amateur service license. The HAREC covers fixed as well as mobile and portable operation. "It shall be at the discretion of Administrations to permit aeronautical and maritime mobile operations." Foreign visiting amateurs operating under T/R 61-01E may not operate a fixed location station.

CONDITIONS FOR NATIONAL EXAMINATIONS

A *Harmonized Amateur Radio Examination Certificate* will be issued by CEPT Administrations to persons who have passed a national examination for radio amateurs that meets the CEPT examination "A" and "B" level criteria. The ten page examination syllabus for the HAREC is listed in Annex 4 of T/R 61-02. The only difference in the examination levels is that level "A" includes code proficiency. "B" does not.

Here is what the CEPT countries believe the examination syllabus should be for an international amateur radio license: (At least one non-CEPT country - New Zealand - is working to align their amateur service with the CEPT recognized guidelines.)

(I) Technical, operational and regulatory matters

TECHNICAL CONTENT

1. Electrical, Magnetic and Radio Theory
2. Components
3. Circuits
4. Receivers
5. Transmitters
6. Antennas & Transmission Lines
7. Propagation
8. Measurements
9. Interference and Immunity
10. Safety (Biological, high voltages, lightening)

NATIONAL AND INTERNATIONAL OPERATING RULES AND PROCEDURES

1. Phonetic Alphabet
2. Q-Code used by amateurs
3. Operational abbreviations
4. International distress signs, amateur emergency traffic and natural disaster communications.
5. Use, composition and identification of call signs
6. Principles/purposes of the IARU band plans

NATIONAL & INTERNATIONAL RADIO AMATEUR/ RADIO AMATEUR SATELLITE REGULATIONS

1. ITU radio regulations
2. CEPT regulations
3. National Laws and Regulations

(II) Sending and receiving Morse code signals

The examinee is required to demonstrate his/her ability to send and transcribe in Morse code, plain texts, number groups, punctuation and other signs:

1. At a speed not less than 12 words per minute
2. For a duration of at least 3 minutes
3. With a maximum of 4 errors in reception
4. With a maximum of 1 uncorrected and 5 corrected errors in transmission
5. Using a non-automatic Morse key.

THE HAREC DOCUMENT

The CEPT *Harmonized Amateur Radio Examination Certificate* shall contain at least the following information in a language of the CEPT country of issue as well as in English, French and German.

- (a) A statement that the holder has passed an examination, meeting the requirements of a CEPT examination level "A" or "B" certificate.
- (b) The holder's name and birthdate
- (c) CEPT examination level of certificate
- (d) The date of issue
- (e) The issuing authority

An example of how the *Harmonized Amateur Radio Examination Certificate* (HAREC) is to be printed is shown in Annex 3 of the Recommendation. It reads:

HARMONIZED AMATEUR RADIO EXAMINATION CERTIFICATE (HAREC) based on CEPT Recommendation T/R 61-02E

1. The issuing Administration or responsible issuing Authority: _____ of the country _____ declares that the holder of this certificate has successfully passed an amateur examination which fulfills the requirements laid down by the International Telecommunication Union (ITU). The passed examination is comparable with level (A or B), as indicated in CEPT Recommendation T/R 61-02E (HAREC). According to the amateur radio regulations of the country _____, the holder of this certificate is entitled to receive the national license class _____. For the purpose of CEPT Recommendation T/R 61/01E this national license is classified as being CEPT license class _____ as listed in Column 3 of Appendix II of Recommendation T/R 61-01E.
2. Certificate holder's name: _____
3. Birthdate: _____ 4. Date of Issue: _____
5. Officials requiring information about this certificate should address their enquiries to the issuing national Authority of the issuing Administration. (Signature and official stamp.)

This same information is repeated in French and German.